Claims

An information device for use with an engine of a vehicle, the device including;

a lighting means device for providing information about a power position of the vehicle,

an engine running detection device for detecting engine running,

a gear shift position detection device for detecting gear shift position, and

an illuminance control device for controlling illuminance of the lighting device so that, when a detection is made by the engine running detection device that the engine is running and by the gear shift position detection device that the gear shift position is other than in a P range or N range, the illuminance control device reduces the illuminance of the lighting device compared with the illuminance of the lighting device when the gear shift position is in the P range or N range.

2. The device as claimed in claim 1, wherein the illuminance control device is operable so that, when the illuminance of the lighting device has been reduced and a detection is made by the engine running detection device and the gear shift position detection device that the operating situation has become one where the gear shift position is in the P range or N range from an operating situation where the engine was running and the gear shift position was other than in the P range or N range, the illuminance of the lighting device is increased.

3. The device as claimed in claim 1, further comprising a vehicle speed detection device for detecting vehicle speed, wherein the illuminance control device is operable to alter the illuminance of the lighting device in response to the detected vehicle speed.

4. The device as claimed in claim 3, wherein the illuminance control device is operable to reduce the illuminance of the lighting device, in comparison with when the vehicle speed is less than a fixed value of vehicle speed, when a detection is made by the vehicle speed detection device that the vehicle speed is greater than the fixed value.

5. The device as claimed in claim 3, wherein the illuminance control device is operable to increase the illuminance of the lighting device when a detection is made by the vehicle speed detection device that the operating situation has changed from one in which the vehicle speed was above a fixed value to an operating situation where the vehicle speed is reduced below the fixed value.

6. The device as claimed in claim 4, wherein the illuminance control device is operable so as to extinguish the lighting device when the illuminance is reduced.

7. The device as claimed in claim 1, wherein the lighting device is mountable within a vehicle instrument panel

8. The device as claimed in claim 1, wherein the lighting device is provided in an engine start switch.

9. The device as claimed in claim 1, wherein the lighting device is provided in a power position indicator lamp.

10. The device as claimed in claim 1, wherein the illuminance control device includes a CPU of an engine control unit.

11. An information device for use with an engine of a vehicle, the device including;

a lighting device for providing information about a power position of the vehicle,

a vehicle speed detection device for detecting vehicle speed, and

an illuminance control device for controlling illuminance of said lighting device in response to vehicle speed so that, when a detection is made that the vehicle speed is less than a fixed value of vehicle speed the illuminance of the lighting device is increased compared with the illuminance of the lighting device when the vehicle speed is higher than the fixed value.

12. The device as claimed in claim 11, wherein the illuminance control device is operable to reduce the illuminance of the lighting device, in comparison with when the vehicle speed is less than the fixed value of vehicle speed, when a detection is made by the vehicle speed detection device that the vehicle speed is greater than the fixed value.

13. The device as claimed in claim 11, wherein the illuminance control device is operable to increase the illuminance of the lighting device when a detection is made by the vehicle speed detection device that the operating situation has changed from one in which the vehicle speed was above the fixed value to an operating situation where the vehicle speed is reduced below the fixed value.

14. The device as claimed in claim 12, wherein the illuminance control device is operable so as to extinguish the lighting device when the illuminance is reduced.

15. A method of displaying power position information in a vehicle, the method including;

providing a lighting device for providing information about a power position of the vehicle,

detecting whether the engine is running or not running,

detecting an engine gear shift position, and

controlling illuminance of said lighting device in response to the detection engine running condition and the detected engine gear shift position so that the illuminance is reduced in comparison with an operating situation where the engine is running and the gear shift position is in a P or N range when a detection is made of an operating situation where the engine is running and the gear shift position is other than in the P or N range.

16. The method as claimed in claim 15, including extinguishing the lighting device altogether during the step of reducing the illuminance.

17. The method as claimed in claim 15, further comprising detecting vehicle speed and altering the illuminance of the lighting device by the illuminance control device in response to the detected vehicle speed.

18. The method as claimed in claim 17, including reducing the illuminance of the lighting device, in comparison with when the vehicle speed is less than a fixed value of vehicle speed, when a detection is made by the vehicle speed detection device that the vehicle speed is greater than the fixed value.

19. The method as claimed in claim 17, including increasing the illuminance of the lighting device when a detection is made by the vehicle speed detection device that the operating situation has changed from one in which the vehicle speed was above a fixed value to an operating situation where the vehicle speed is reduced below the fixed value.

20. A method of displaying power position information in a vehicle, the method including;

providing a lighting device for providing information about a power position of the vehicle,

detecting the vehicle speed,

comparing the detected vehicle speed with a fixed value of vehicle speed, and

controlling illuminance of said lighting device in response to the comparison so that the illuminance is reduced in comparison with an operating situation where the vehicle speed is less than the fixed value of vehicle speed when the comparison indicates that an operating situation has a vehicle speed greater than the fixed value of vehicle speed.

21. An information device for use with an engine of a vehicle, the device including;

lighting means (27, 28) for providing information about a power position of the vehicle,

engine running detection means (70, 71) for detecting engine running,

gear shift position detection means (60, 61) for detecting gear shift position, and

illuminance control means (20) for controlling illuminance of the lighting means (27, 28) so that, when a detection is made by the engine running detection means (70, 71) that the engine is running and by the gear shift position detection means (60, 61) that the gear shift position is other than in a P range or N range, the illuminance control means (20) reduces the illuminance of the lighting means (27, 28) compared with the illuminance of the lighting means (27, 28) when the gear shift position is in the P range or N range.

22. The device as claimed in claim 21, wherein the illuminance control means is operable so that, when the illuminance of the lighting means (27, 28) has been reduced

and a detection is made by the engine running detection means (10) and the gear shift position detection means (60, 61) that the operating situation has become one where the gear shift position is in the P range or N range from an operating situation where the engine was running and the gear shift position was other than in the P range or N range, the illuminance of the lighting means (27, 28) is increased.

23. The device as claimed in claim 21 or claim 22, further comprising vehicle speed detection means (81) for detecting vehicle speed, wherein the illuminance control means (20) is operable to alter the illuminance of the lighting means (27, 28) in response to the detected vehicle speed.

24. The device as claimed in claim 23, wherein the illuminance control means (20) is operable to reduce the illuminance of the lighting means (27, 28), in comparison with when the vehicle speed is less than a fixed value of vehicle speed, when a detection is made by the vehicle speed detection means (81) that the vehicle speed is greater than the fixed value.

25. The device as claimed in claim 24, wherein the illuminance control means (20) is operable so as to extinguish the lighting means (27, 28) when the illuminance is reduced.

26. The device as claimed in any one of claims 23 to 25, wherein the illuminance control means (20) is operable to increase the illuminance of the lighting means (27, 28) when a detection is made by the vehicle speed detection means (81) that the operating situation has changed from one in which the vehicle speed was above a fixed value of vehicle speed to an operating situation where the vehicle speed is reduced below the fixed value.

27. The device as claimed in any one of claims 21 to 26, wherein the lighting means (27, 28) is mountable within a vehicle instrument panel.

28. The device as claimed in any one of claims 21 to 27, wherein the lighting means is provided in an engine start switch (10).

29. The device as claimed in any one of claims 21 to 28, wherein the lighting means is provided in a power position indicator lamp (27).

30. The device as claimed in any one of claims 21 to 29, wherein the illuminance control means includes a CPU (23) of an engine control unit (20).

31. An information device for use with an engine of a vehicle, the device including;

lighting means (27, 28) for providing information about a power position of the vehicle,

vehicle speed detection means (81) for detecting vehicle speed, and

illuminance control means (20) for controlling illuminance of the lighting means (27, 28) in response to vehicle speed so that, when a detection is made that the vehicle speed is less than a fixed value of vehicle speed the illuminance of the lighting means (27, 28) is increased compared with the illuminance of the lighting means (27, 28) when the vehicle speed is higher than the fixed value.

32. The device as claimed in claim 31, wherein the illuminance control means (20) is operable to reduce the illuminance of the lighting means (27, 28), in comparison with when the vehicle speed is less than a fixed value of vehicle speed, when a detection is made by the vehicle speed detection means (81) that the vehicle speed is greater than the fixed value of vehicle speed.

33. The device as claimed in claim 32, wherein the illuminance control means (20) is operable so as to extinguish the lighting means (27, 28) when the illuminance is reduced.

34. A method of displaying power position information in a vehicle, the method including;

providing a lighting means (27, 28) for providing information about a power position of the vehicle,

detecting whether the engine is running or not running,

detecting an engine gear shift position, and

controlling illuminance of said lighting means (27, 28) in response to the detection engine running condition and the detected engine gear shift position so that the illuminance is reduced in comparison with an operating situation where the engine is running and the gear shift position is in a P or N range when a detection is made of an operating situation where the engine is running and the gear shift position is other than in the P or N range.

35. A method of displaying power position information in a vehicle, the method including;

providing a lighting means (27, 28) for providing information about a power position of the vehicle,

detecting the vehicle speed,

comparing the detected vehicle speed with a fixed value of vehicle speed, and

controlling illuminance of said lighting means (27, 28) in response to the comparison so that the illuminance is reduced in comparison with an operating situation where the vehicle speed is less than the fixed vehicle speed when the comparison indicates that an operating situation has a vehicle speed greater than the fixed value of vehicle speed.

36. The method as claimed in claim 34 or claim 35, including providing the lighting means in at least one of an engine start switch (28) or a power position indicator lamp (27).